



130-122

C&H  
2501

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Bruce K. Winker  
For: MONOLITHIC OPTICAL COMPENSATION  
DEVICE FOR IMPROVED VIEWING ANGLE  
IN LIQUID CRYSTAL DISPLAYS

Honorable Commissioner of Patents and  
Trademarks  
Washington, DC 20231

RECEIVED  
MAY 25 1995  
GROUP 2500

Serial No: 08/313,532  
Filed: 30 September 1994  
Group Art Unit: Unknown  
Examiner: Unknown  
Atty Dkt: 94CR110

## CERTIFICATE OF MAILING (37 C.F.R. 1.8)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, DC 20231, on the date below.

10 MAY 95  
DateCoe F. Miles  
Printed Name

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

## PURSUANT TO 37 C.F.R. §§ 1.97(b)(1) AND 1.98

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is requested that this supplemental Information Disclosure Statement (IDS) be entered and that the listed references in the attached PTO form 1449 be considered by the Examiner and made of record. Copies of the listed references, including an English translation of one document (European patent document 0 576 342 A1), are enclosed for the convenience of the Examiner. A copy of the European Patent Office (EPO) Search Report, from which the cited references were obtained, is also enclosed for the benefit of the Examiner.

In addition to the references listed in the attached form 1449, the following references were identified in EPO searches performed for co-pending and commonly assigned U.S. patent applications that relate, generally, to the same technological field. (U.S. serial numbers: 08/223,251; 08/313,476; 08/313,477; 08/313,478; 08/313,509; 08/313,510; 08/313,531.) The following information is provided solely for the Examiner's convenience.

020 AA 05/22/95 08313532

1 122 130.00 CK

ROCL:013

- 1. U.S. patent 5,309,264, issued on 3 May 1994 to Lien et al.
- 2. U.S. patent 4,874,664, issued on 17 October 1989 to Hamaguchi et al.
- 3. European patent document 0 613 037 A2, published 31 August 1994 for Sharp Kabushiki Kaisha.
- 4. European patent document 0 576 931 A2, published 5 January 1994 for Casio Computer Co.
- 5. European patent document 0 576 304 A1, published 29 December 1993 for Sharp Kabushiki Kaisha.
- 6. European patent document 0 543 678 A1, published 26 May 1993 for Nippon Oil Co., LTD.
- 7. European patent document 0 535 324 A1, published 7 April 1993 for Optrex Europe GmbH.
- 8. European patent document 0 529 813 A2, published 3 March 1993 for Nippon Oil Co., LTD.
- 9. European patent document 0 423 881 A1, published 24 April 1991 for N.V. Phillips.
- 10. Switzerland-Liechtenstein patent document CH 661 361 A5, published 15 July 1987 for BBC Aktiengesellschaft Brown, Boveri & Cie., Baden..
- 11. Crandall et al., "Homeotropic, Rub-Free Liquid-Crystal Light Shutter," *Appl. Phys. Lett.*, Vol. 65, No. 1, 1994, pp. 118-120.
- 12. Hamaguchi, "Phase Compensation Plate," *Patent Abstracts of Japan*, Vol. 14, No. 301, 1990, pp. 1069.
- 13. Hodgkinson et al., "Measurement of the Principal Refractive Indices of Thin Films Deposited at Oblique Incidence," *J. Opt. Soc. Am. A*, Vol. 2, No. 10, 1985, pp. 1693-1697.
- 14. Kazo, "Liquid Crystal Display Device," *Patent Abstracts of Japan*, Vol. 12, No. 413, 1988, pp. 780.
- 15. Motohiro et al., "Thin Film Retardation Plate By Oblique Deposition," *Applied Optics*, Vol. 28, No. 13, 1989, pp. 2466-2482.
- 16. Yang, "Two-Domain Twisted Nematic and Tilted Homeotropic Liquid Crystal Displays for Active Matrix Applications," *IEEE International Display Research Conference*, 1991, pp. 68-72.
- 17. Yoshihiro, "Organic Film for Optical Compensation and Production Thereof," *Patent Abstracts of Japan*, Vol. 13, No. 540, 1990, pp. 969.
- 18. "Multicolor Parallel-Oriented Nematic Liquid Crystal Displays Using Optical Compensation Films," *IBM Technical Disclosure Bulletin*, Vol. 33, No. 12, 1991, pp. 201-202.

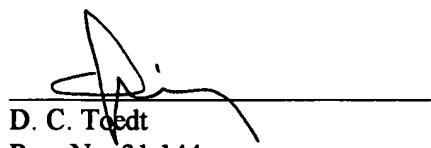
- 19. "Normally White Negative Birefringence film Compensated Twisted Nematic Liquid Crystal Displays with Improved Optical Performance, IBM Technical Disclosure Bulletin, Vol. 36, No. 09B, 1993, pp. 361.

In accordance with 37 C.F.R. §§ 1.97(b)(3) and 1.98, the filing of this IDS and submission of the cited references should not be construed as an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b), or as a representation that no other possibly material information exists.

No fee is believed to be necessary for the present IDS since it is being filed prior to the mailing of a first Office Action on the merits. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayments, to Deposit Account No. 01-2508/TOE.

Respectfully submitted,

Date: 10 MAY 95

  
D. C. Toedt  
Reg. No. 31,144  
Coe F. Miles  
Reg. No. 38,559  
ARNOLD, WHITE & DURKEE  
P.O. Box 4433  
Houston, TX 77210  
(713) 787-1408

ATTORNEYS FOR ASSIGNEE